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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,659	06/09/2000	Gregory Allen North	1042-EP	3262

7590 11/10/2003

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EXAMINER

NGO, CHUONG D

ART UNIT	PAPER NUMBER
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2124

DATE MAILED: 11/10/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/591,659

Applicant(s)

NORTH ET AL.

Examiner

Chuong D Ngo

Art Unit

2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 18-35 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-17 is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAIL OF ACTION

1. Applicant's election without traverse of Group I, claims 1-17 in Paper No. 9 is acknowledged. Claims 18-35 are withdrawn from further consideration as being drawn to non-elected invention..

2. Claims 3-7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 3, the recitation "generate a first product and first carry bit", line 4, is indefinite as to what the "first carry bit" is. For the purpose of examination, the "first carry bit" is assumed the most significant bit of the first product. The assumption is similarly applied to the other "carry bit". Further, the recitations "unsigned second set of bits", line 8, and "signed second set of bits", line 17, make it unclear whether the "second set of bits" from the second source register is "unsigned" or "signed". Further, the recitation "the signed second set of bits", lines 16-17", lacks a proper antecedent basis.

As per claims 4-7, the positions of the first and second sets of bits from the first and second source registers as recited in the claims appear in the reverse order.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kuroda et al. (4,722,068)

As per claims 1 and 2, Kuroda et al. disclose in figure 8a a multiplier-accumulator having a multiplier array (22), an adder (32), and a multiplexer circuitry (31,36) as claimed.

As per claims 3-7, Kuroda et al also discloses in figure 1 the double precision multiplication as claimed.

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuroda et al. (4,722,068) in view of Landers et al. (WO 98/32071).

It is noted that Kuroda does not disclose the processor including a floating point comparator and adder as claimed. However, Lander discloses in figure 3 a floating point comparator and adder (70) in addition to MAC unit (68) for allowing the execution of multiple operations per cycle (page 11, lines 3-5). Thus, it would have been obvious to a person of ordinary skill in the art to provide the processor of Kuroda et al. with an additional floating point comparator and adder (70) as taught by Landers et al. in order to execute multiple operations per cycle, and thus reduce the processing time.

7. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Tanoue et al. (6,233,597)

As per claims 1 and 2, Tanoue et al. disclose in figure 1 a multiplier-accumulator having a multiplier array (13), an adder (14), and a multiplexer circuitry (18,19) as claimed.

As per claims 3-7, Tanoue et al also discloses in figures 2-6 the double precision multiplication as claimed.

8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanoue et al. (6,233,597) in view of Landers et al. (WO 98/32071).

It is noted that Tanoue et al. does not disclose the processor including a floating point comparator and adder as claimed. However, Lander discloses in figure 3 a floating point comparator and adder (70) in addition to MAC unit (68) for allowing the execution of multiple operations per cycle (page 11, lines 3-5). Thus, it would have been obvious to a person of ordinary skill in the art to provide the processor of Tanoue et al. with an additional floating point comparator and adder (70) as taught by Landers et al. in order to execute multiple operations per cycle, and thus reduce the processing time.

9. Claims 10-17 are allowed.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D. Ngo whose telephone number is (703) 305-9764. The examiner can normally be reached on Monday-Friday from 7:30 AM to 6:00 PM.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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11-06-03



Chuong D. Ngo
Primary Examiner
Art Unit 2124